

PTO/SB/21 (08-03)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/679,049-Conf. #5336	
	Filing Date	October 3, 2003	
	First Named Inventor	Jan Weber	
	Art Unit	3731	
	Examiner Name	Not Yet Assigned	
Total Number of Pages in This Submission	8	Attorney Docket Number	29985/02-0321

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Signature: Kurt T. Buechle

(Kurt T. Buechle)

Docket No.: 29985/02-032I
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jan Weber et al.

Confirmation No. 5336

Application No.: 10/679,049

Art Unit: 3731

Filed: October 3, 2003

Examiner: Not Yet Assigned

For: NANO-ACTUATED MEDICAL DEVICE

INFORMATION DISCLOSURE STATEMENT (IDS)

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Dear Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the U.S. Patent and Trademark Office is hereby directed to the documents listed on the attached Form PTO/SB/08A. It is respectfully requested that the documents be considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is believed to be filed before the mailing date of a first Office Action on the merits.

The references listed on the attached Form PTO/SB/08A are not supplied as they have been cited by, or submitted to, the U.S. Patent and Trademark Office in the present application or in related U.S. Application No. 10/270,815, filed October 15, 2002, which is relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an

admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 C.F.R. § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 C.F.R. § 1.98 and the Examiner is respectfully requested to consider the listed references.

While applicants submit that no fee is due because a first action on the merits has not yet been mailed, the Commissioner is hereby authorized to charge any fee, or deficiency thereof, that should have been filed herewith, to our Deposit Account No. 13-2855, under Order No. 29985/02-032I. A duplicate of this paper is enclosed.

Dated: April 13, 2004

Respectfully submitted,

By 

Kurt T. Buechle

Registration No.: 54,011

MARSHALL, GERSTEIN & BORUN LLP

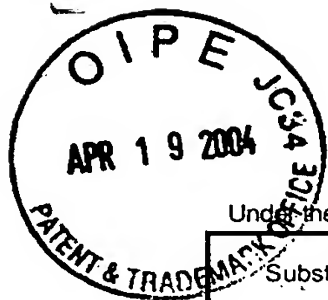
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PTO/SB/08A (10-01)

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Sheet	1	of	5	Attorney Docket Number	29985/02-0321

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	4,273,128	06-16-1981	Lary	
	A2	4,765,332	08-23-1988	Fischell et al.	
	A3	4,926,858	05-22-1990	Gifford, III et al.	
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Sheet	2	of	5	Attorney Docket Number	29985/02-0321

	A45	6,302,906	10-16-2001	Goicoechea et al.	
	A46	6,319,242	11-20-2001	Patterson et al.	
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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B1	WO 01/34685	05-17-2001	O'Neil et al.		
	B2	WO 02/082974	10-24-2002	Bashiri et al.		
	B3	WO 93/11190	06-10-1993	Maxfield et al.		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	□ ² □
	C1	"Energetics and Structure of Single Walled Carbon Nanotoroids," Gao et al., California Institute of Technology, 11 pages (2002).	
	C2	"Elastic Properties of Carbon Nanotubes and Nanoropes," Jian Ping Lu, Physical Review Letters, Vol. 79: No. 7, 1297-1300 (1997).	
Examiner Signature			Date Considered

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Sheet	3	of	5	Attorney Docket Number	29985/02-0321

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	C6	"Pneumatic Actuator Response from Carbon Nanotube Sheets," Spinks et al., Intellectual Polymer Research Institute, University of Wollongong, Mat. Res. Soc. Proc. Vol. 706:8-13 (2002).	
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	C8	"Sustained Release Properties of Polyelectrolyte Multilayer Capsules," Antipov et al., J. Phys. Chem., 105:2281-2284 (2001).	
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	C12	"Carbon Nanotube Actuators," Baughman et al., Science, 284:1340-1644 (1999).	
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	C18	"Steerable Microcatheters Actuated by Embedded Conducting Polymer Science," Della Santa et al., J. Intell., Mater. Sys. Struct., 7:292-300 (1996).	
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	C20	"Organic Functionalization of Carbon Nanotubes," Georgakilas et al., J. Am. Chem., 124:760-761 (2002).	
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	C22	"Supramolecular Structures of Novel Carbohydrate-Based Phospholipids," Hird et al., J. Am. Chem. Soc., 122:8097-8098 (2000).	
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	C28	"Structures of High-Stage Donor-Acceptor Hetero-Structure Graphite Intercalation Compounds," Murakami et al., J. Phys. Soc. Japan, 59:571-578 (1990).	
	C29	"The Expansion of the Carbon-Carbon Bond Length in Potassium Graphites," Nixon et al., J.	

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Sheet	4	of	5	Attorney Docket Number	29985/02-0321

		Phys. C., 2:1732-1741 (1969).	
	C30	"Synthesis, Structural Characterization, and Immunological Properties of Carbon Nanotubes Functionalized with Peptides," Pantarotto et al., J. Am. Chem., 125:6160-6164 (2003).	
	C31	"Studies on the Drug Release Properties of Polysaccharide Multilayers Encapsulated Ibuprofen Microparticles," Qiu et al., Langmuir, 17:5375-5380 (2001).	
	C32	"Elastic and Shear Moduli of Single-Walled Carbon Nanotube Ropes," Salvetat et al., Phys. Rev. Lett., 82:944-947 (1999).	
	C33	"Electrochemical Muscles: Micromachining Fingers and Corkscrews," Smela et al., Adv. Mater., 5:630-632 (1993).	
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	C38	"Giant Electrostriction and Relaxor Ferroelectric Behavior in Electron-Irradiated Poly(vinylidene fluoride-trifluoroethylene) Copolymer," Zhang et al., Science, 280:2010-2104 (1998).	
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	C40	"Transport Properties of Triblock Copolymer Ionomer Membranes for Fuel Cells," U.S. Research Laboratory.	
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	C42	"Smart Capsules," in <u>Multilayer Thin Films</u> , Chapter 13, 2003.	
	C43	Electrochem Membrane Materials.	
	C44	Foils List, Lebow Co.	
	C45	Argonide Website.	
	C46	Zyvex website	
	C47	GFD-Diamond website	
	C48	Macromed Website	
	C49	"Carbon Nanotubes as Actuators in Smart Structures," Monner et al., Proceedings of the SPIE-The International Society for Optical Engineering, vol. 5053, pgs. 138-46.	
	C50	"Carbon Nanotube/Polyelectrolyte Composites as Novel Actuator Materials," Chattopadhyay et al., Nanotubes and Related Materials, Symposium (Mater. Res. Soc. Symposium Proceedings, vol. 6363, p. A13.39, 1-6 (2001).	
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	C52	"Practical Considerations for the Demonstration of Single Walled Carbon Nanotube Actuator," Minett et al., AIP Conference Proceedings Conference, AIP Conf. Proc. (USA), no. 591, pgs. 585-9 (2001).	
	C53	"Work Functions of Pristine and Alkali-Metal Intercalated Carbon Nanotubes and Bundles," Jijun et al., Physical Review B (Condensed Matter and Materials Physics), vol. 65, no. 19, pgs. 193401/1-4 (15 May 2002).	
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	C56	"Pneumatic Carbon Nanotube Actuators," Spinks et al., Advanced Materials, vol. 14, no. 23, Dec. 3, 2002, pgs. 1728-1732 (2002)	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

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